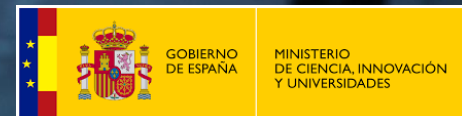


**Spanish
Automotive and
Mobility TP – M2F**

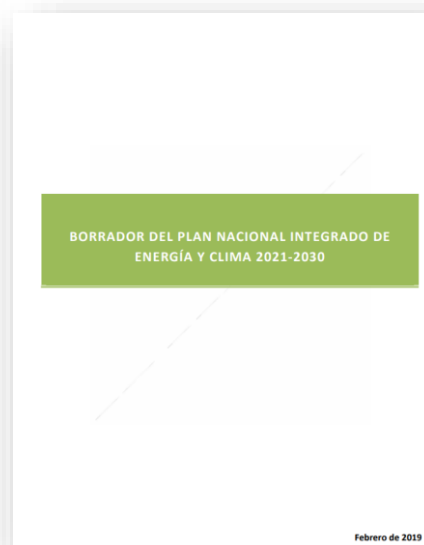
**ERTRAC MMSS/NTP
Annual Meeting -
Brno, 25/06/19**



01.
**National Strategic
Plan to Support
the Automotive
Industry**

Documents published by the Government

- ❑ General guidelines for the new Spanish Industrial Policy 2030 – Feb '19
- ❑ Draft of National Integrated Energy and Climate Plan 2021-2030 – Feb '19
- ❑ Draft of Fair Transition Strategy – end 2018
- ❑ Draft Bill on Climate Change and Energy Transition – Feb '19



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Strategic plan for the automotive industry



Areas of the plan:

1. Establishment of a **sustainable and connected mobility table** that brings together the automotive sector as a whole, as well as the AGE
2. Review of taxation associated with the automotive sector
3. Impulse of **investments in the automotive sector in Spain**, specially oriented to R&D&I and to the production of more sustainable vehicle models in Spain
4. Support for greater penetration of zero-and low-emission vehicles
5. Dual Vocational **Training** and linking the company with university reinforcement

Digital enablers: additive manufacture, IoT, artificial intelligence and analytical data, sensors and embedded systems, cybersecurity, circular economy.

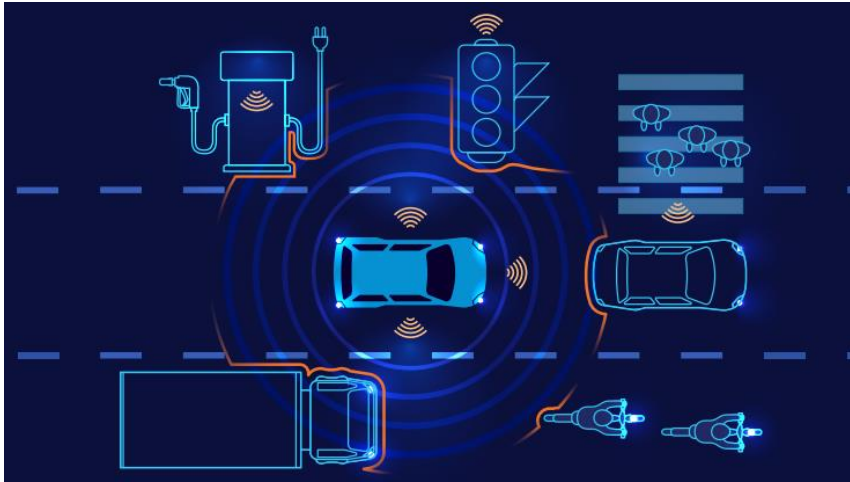
Financial instruments:

- 80M€ - SG Industry and SME
- 75M€ - CDTI



02.
Spanish
Automotive Sector
Strategy

- ❑ ANFAC Mobility Plan (April 2019)



50    
RECOMMENDATIONS
FOR AN INTELLIGENT TRANSITION
TO THE MOBILITY OF THE FUTURE

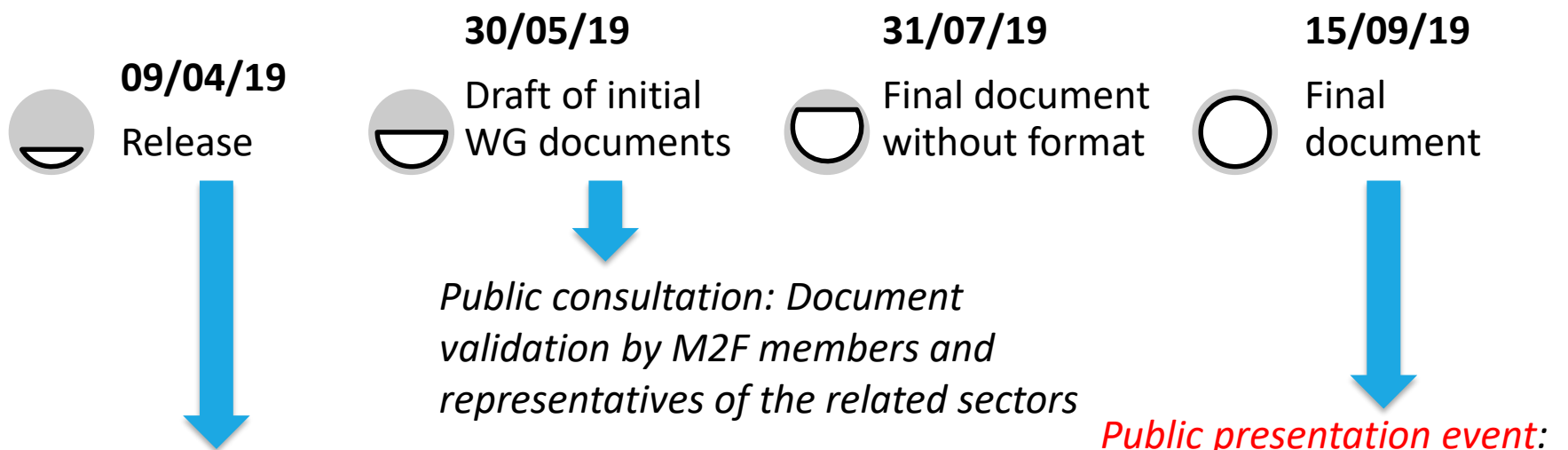
- ❑ ANFAC Strategic Plan 2030-2040
- ❑ CLEPA White book: Future of mobility
- ❑ SERNAUTO report on “impact of electrification on sector’s companies”
(threatened components and opportunities)
- ❑ The R&D working groups documents

7 Working Groups

PROPOSAL: Evolution of the Agenda of Strategic Priorities

- Definition of priorities within the Working Groups
- Roadmap 2020-25

PLANNING:



Working sessions – Objectives:

- Definition of WGs
- Choice of WG leaders
- Work plan

Agenda of Strategic Priorities of R&D&I - WGs



WG1. Intelligent manufacturing, maintenance and internal logistics

WG5. Artificial Intelligence – Data analytics

WG6. Functional design, sustainable materials and production processes



D
**Advanced
Manufacturing**

C
**Lighter and safer
structures**

A
**Propulsion
systems and
alternative
fuels**

B
**Safer and more
autonomous
mobility**




WG2. Batteries and recharging systems

WG3. Traction systems

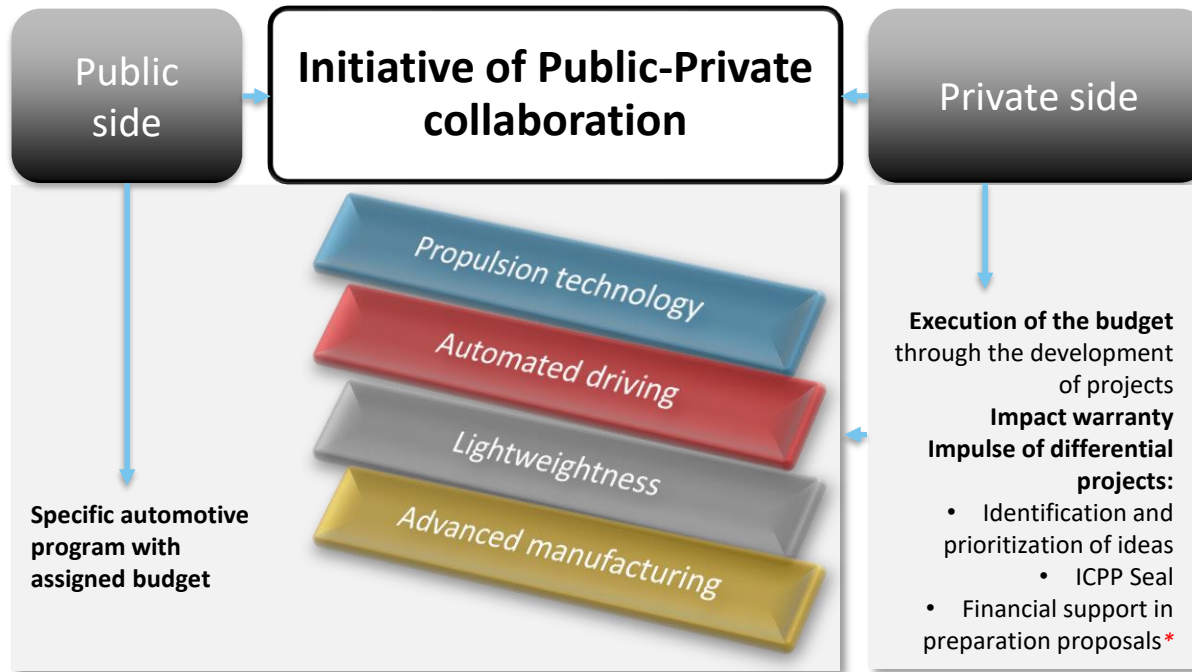
WG4. Connected and automated vehicle

WG5. Artificial Intelligence – Data analytics

E **Fostering of R&D&I** **WG7.** Talent



03.
National PPP

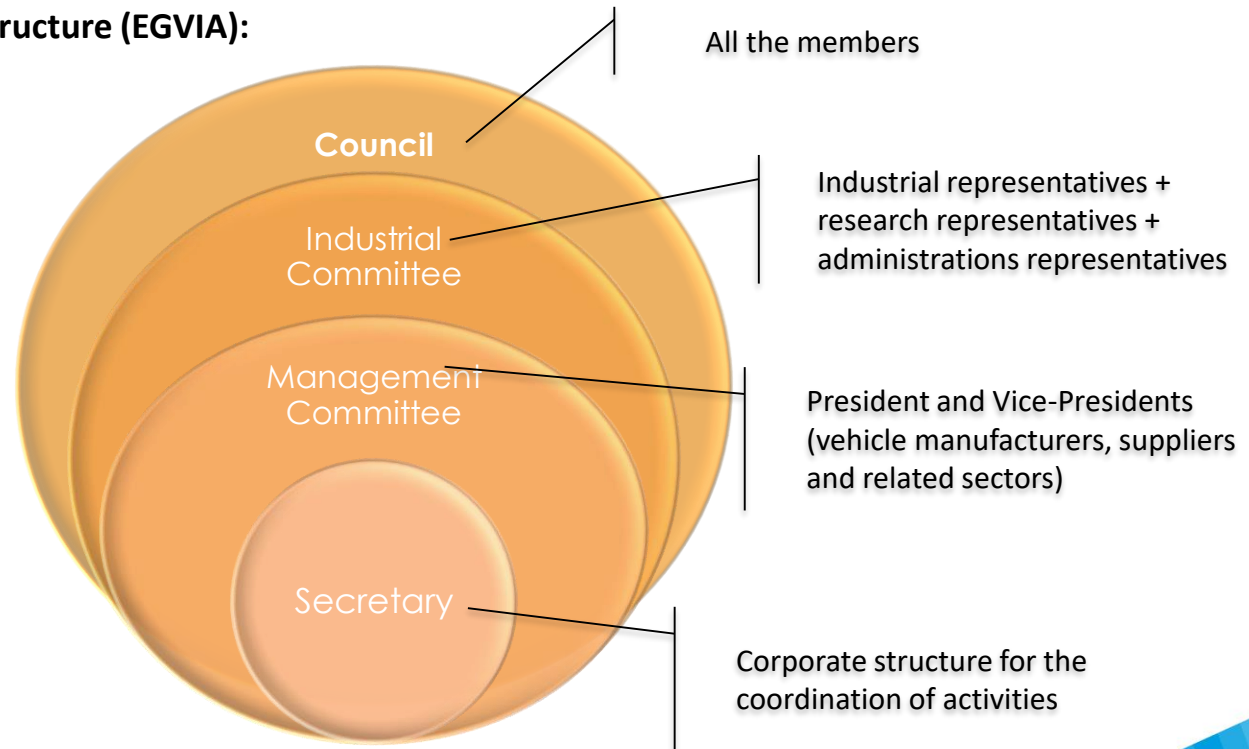


*Depending on public funding

Participation in the strategy of all the parties currently involved or that may be involved in the future to encourage the generation and utilization of capacities.

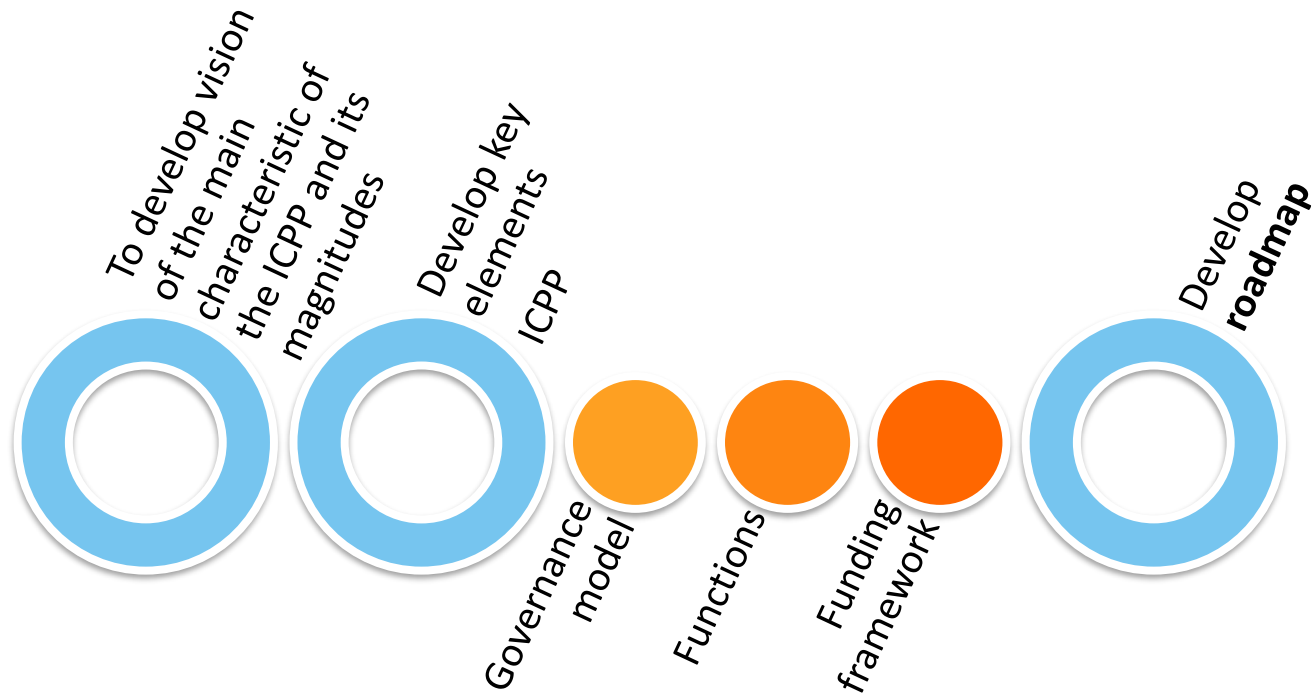
On the basis of the decision on the legal figure, statutes will be written up to establish the founding partners, the categories of members and the structure, with functions clearly defined for their governing bodies.

Model structure (EGVIA):



This configuration allows the representation in the ICPP of all the members involved, maintaining a participatory action.

Next steps





05.
**R&D National
Programs**

Spanish Strategy for Science, Technology and Innovation 2021-27

- Compliance with the Science Law (14/2011)
- **Strategy 2013-2020:** aligned with the EU's 8th Framework Programme Horizon 2020 which adopted an integrated vision → "from idea to market" view
- **Strategy 2021-2027:** new scenario marked by Horizon Europe, this integrated vision goes further → "from the idea to society"
- Alignment with the Sustainable Development Objectives (SDO) of Agenda 2030
- Focused on:
 - Horizon Europe
 - International environment
 - Needs of society



- **Open call (12 months)**
- **Objective:** Funding of individual R&D projects developed by companies that collaborate with state-level Technology Centres in the priority Cervera technologies
- **Loan of up to 85% of the approved budget.** The aid consists of a non-repayable bracket of 33%
- **Characteristics of the project:**
 - Minimum eligible budget: 175,000 euros
 - Relevant participation of Technology Centers of at least 10% of the total budget
 - Duration: 12-36 months
 - 10 major areas of priority technologies:
 1. Advanced materials
 2. Eco-Innovation: "aimed at reducing consumption of raw materials, or reducing waste, pollution,..."
 3. Energy transition "aimed at improving electrical technologies, H2,...)
 4. Intelligent manufacturing
 5. Technologies for health
 6. Safe and healthy food chain
 7. Deep learning and Artificial Intelligence
 8. Advanced mobile networks
 9. Intelligent transport
 10. Protection of information

- **Budget of around 70 M euros focused on 5 major thematic challenges:**
 - Safe, Efficient and Clean Energy for the 21st Century
 - Sustainable and intelligent mobility for the 21st century
 - Sustainable and healthy agrofood industry
 - Competitive and sustainable digital industry and economy
 - A great health industry for Spanish society

- **2 types of large projects consorted between companies and with a 20% subcontracting of research centers:**
 - Projects around 5 M € and duration of 3-4 years, with participation of between 3 and 8 companies, at least one of them SMEs and led by a large company. 85% of the project dedicated to industrial research (up to TRL 4) and 15% of the project development (up to TRL 6)
 - Projects to guarantee access to SMEs in the order of 1.5 to 3 M € and duration of 2-3 years, with the participation of between 3 and 6 companies, led by a medium-sized company. 60% of the project dedicated to industrial research (up to TRL 4) and 40% of the development project (up to TRL 6)

- **The subsidy intensities would be in the order of 60% for large companies and 75% for SMEs**

17 Horizon Europe - SPAIN

- **Shadow Committee:** 2 Spanish representatives (CDTI – Industrial / CSIC – Scientific)
- **Inter-ministerial WG:** Spanish position on the EU's 9th Framework Programme – Heurope. Partnerships support:
 - 2ZERO (Co-programmed)
 - Batteries (Co-programmed)
 - MOSART (under analysis)
- **IPCEI & SVC**



M2F

Move to Future



Cecilia Medina Marín
Manager of R&D&I and Training in SERNAUTO
M2F Coordinator
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ANNEX

Autonomous drive test sites

Catalonia (Catalonia Living Lab)

- 6,000 digitalized km
- 7 predefined routes with more than 103 km
- 7 predefined urban/industry areas with a surface of 2 km² approximately
- 3 circuits: Montmeló, Castellolí and IDIADA

Galicia

- SISCOGA Corridor: more than 120 km of interurban and urban open roads
- Euroregion Galicia-North of Portugal: Cross-border mobility corridor (Vigo-Porto connection, 150Km)
- Cross tests (Scoop Project): Galicia-Portugal, France
- Small fleet of vehicles/prototypes ready for tests



Madrid (AUTOCITS)

- 16 km in Madrid Urban Node (Bus-VAO A6)
- 2 autonomous vehicles and 1 instrumented vehicle

cRoads Spain

- M30 highway Madrid: 30 km deployment of C-ITS communications with 10 km enabled ITS-G5 communications
- Mediterranean corridor: 125 km using hybrid technology
- Cantabrian corridor: 75km using hybrid communication technologies

BEV & Hybrid autoparts manufactured in Spain

SYSTEM

COMPANIES

AUTOPARTS



Electric motor



DOGA



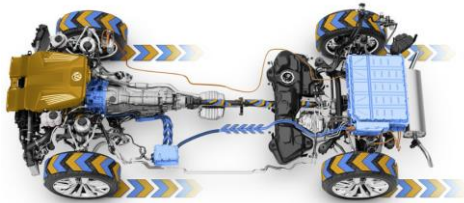
- Electric motor
- Electric motor housing
- Electric motor accessories
- Electric motor rotor
- Electric motor control system



Battery pack



- BMS (Battery Management System)
- BMC (Battery Management Control)
- CMC (Cell Monitoring Control)
- Sensors
- Battery box and structural elements
- Battery charger
- Battery thermal management, battery cooling
- ECU



Hybrid powertrain system



SUMITOMO RIKO GROUP

anvis

- Transmission parts and housing
- Engine bracket
- Cooling systems

BEV & Hybrid autoparts manufactured in Spain

SYSTEM

COMPANIES

AUTOPARTS



Body & chassis

Adler Pelzer Group **BORGERS**

Gestamp **FAE** **MONDRAGON** HUMANITY AT WORK Finanzas Industria Distribución Conocimiento

MAHLE **SUMITOMO RIKO GROUP** **anvis** **SMP**

- Chassis
- Body panels
- eHAV
- Air Conditioning and climatisation systems
- Acoustic and thermal isolation
- Interior: trims, panels,



E-drive System

Electronics & systems

BITRON **CIE Automotive**

FAE **FICOSA** **LEAR** Where Passion Drives Possibilities

MONDRAGON HUMANITY AT WORK Finanzas Industria Distribución Conocimiento **MAHLE**

rpk **Valeo**

- Electrical auxiliaries
- Electronic modules
- AC/DC Converters & inverters
- LED lighting systems
- Battery chargers and components
- Driver, PCB, ECU
- Digital rear view systems
- Sensors, electrovalves,...
- Boxes and cooling systems for power electronics



Brakes, suspension & steering

MONDRAGON HUMANITY AT WORK Finanzas Industria Distribución Conocimiento **BOSCH**

ICER **ICER BRAKES S.A.** Efficient Braking Solutions **MANN + HUMMEL**

- Brake components (pedals, ...)
- Dust filter for brake pads
- iBooster, servobrake
- Brake pads for BEV